

WHAT IS CLAIMED IS:

1 1. For use in association with a backplane of an item of
2 electronic equipment wherein said backplane comprises a common
3 control bus that can access a first number of device locations, an
4 apparatus capable of allowing said common control bus to access
5 more than said first number of device locations, said apparatus
6 comprising:

7 a complex programmable logic device on a circuit board
8 card within said backplane, wherein said complex programmable logic
9 device is coupled to said common control bus, and wherein said
10 complex programmable logic device is capable of coupling each one
11 of a plurality of device locations on said circuit board card to
12 said common control bus.

1 2. The system as set forth in Claim 1 wherein said complex
2 programmable logic device controls the access of a device to said
3 common control bus when a device location of said device is coupled
4 to said common control bus.

1 3. The system as set forth in Claim 1 wherein said complex
2 programmable logic device couples device locations on said circuit
3 board card to said common control bus to allow said common control
4 bus to access a second number of device locations on said circuit
5 board card through said complex programmable logic device.

1 4. The system as set forth in Claim 3 wherein said second
2 number of device locations on said circuit board card that said
3 common control bus can access through said complex programmable
4 logic device is greater than said first number of device locations
5 that said common control bus can otherwise access.

1 5. The apparatus as set forth in Claim 1 further comprising:
2 a card processor on said circuit board card within said
3 backplane, said card processor coupled to said common control bus.

1 6. The apparatus as set forth in Claim 5 wherein said card
2 processor is coupled to said common control bus through a serial
3 clock line connection and through a serial data line connection.

1 7. The apparatus as set forth in Claim 5 further comprising:

2 an electrically erasable programmable read only memory on
3 said circuit board card, said electrically erasable programmable
4 read only memory coupled to said common control bus;

5 wherein said complex programmable logic device controls
6 the access of said electrically erasable programmable read only
7 memory to said common control bus when said electrically erasable
8 programmable read only memory is coupled to said common control
9 bus.

1 8. The apparatus as set forth in Claim 7 wherein said
2 electrically erasable programmable read only memory is coupled to
3 said common control bus through a serial clock line connection and
4 through a serial data line connection.

1 9. The apparatus as set forth in Claim 7 wherein said
2 complex programmable logic device is coupled to said common control
3 bus through a serial clock line connection and through a serial
4 data line connection.

1 10. The apparatus as set forth in Claim 1 wherein said common
2 control bus comprises a first two wire bus and a second two wire
3 bus, and wherein said apparatus comprises:

4 a card processor on said circuit board card within said
5 backplane, said card processor coupled to said first two wire bus
6 and to said second two wire bus of said common control bus through
7 metal oxide semiconductor field effect transistor switches;

8 an electrically erasable programmable read only memory on
9 said circuit board card, said electrically erasable programmable
10 read only memory coupled to said first two wire bus and to said
11 second two wire bus of said common control bus through metal oxide
12 semiconductor field effect transistor switches; and

13 wherein said complex programmable logic device is coupled
14 to said first two wire bus and to said second two wire bus of said
15 common control bus through metal oxide semiconductor field effect
16 transistor switches.

1 11. The apparatus as set forth in Claim 10 wherein said
2 complex programmable logic device controls the access of said
3 electrically erasable programmable read only memory to said first
4 two wire bus and to said second two wire bus of said common control
5 bus.

1 12. For use in association with a backplane of an item of
2 electronic equipment wherein said backplane comprises a common
3 control bus that can access a first number of device locations,
4 a method for allowing said common control bus to access more than
5 said first number of device locations, said method comprising the
6 steps of:

7 coupling each one of a plurality of device locations on
8 said circuit board card to said common control bus through a
9 complex programmable logic device on said circuit board card; and
10 controlling the access of a device on said circuit board
11 card to said common control bus when a device location of said
12 device is coupled to said common control bus.

1 13. The method as claimed in Claim 12 further comprising the
2 step of:

3 coupling a second number of device locations on said circuit
4 board card to said common control bus through a complex
5 programmable logic device on said circuit board card.

1 14. The method as set forth in Claim 13 wherein said second
2 number of device locations is greater than said first number of
3 device locations that said common control bus can access not using
4 said complex programmable logic device.

1 15. The method as claimed in Claim 12 further comprising the
2 steps of:

3 coupling a card processor on said circuit board card
4 within said backplane to said common control bus;

5 providing clock signals to said card processor from a
6 serial clock line coupled to said common data bus;

7 reading data from said card processor on a serial data
8 line coupled to said common data bus; and

9 writing data to said card processor from said serial data
10 line.

1 16. The method as set forth in Claim 12 further comprising
2 the steps of:

3 coupling a electrically erasable programmable read only
4 memory on said circuit board card within said backplane to said
5 common control bus;

6 providing clock signals to said electrically erasable
7 programmable read only memory from a serial clock line coupled to
8 said common data bus;

9 reading data from said electrically erasable programmable
10 read only memory on a serial data line coupled to said common data
11 bus; and

12 writing data to said electrically erasable programmable
13 read only memory from said serial data line.

1 17. The method as set forth in Claim 16 further comprising
2 the step of:

3 controlling the access of said electrically erasable
4 programmable read only memory to said common control bus with said
5 complex programmable logic device.

1 18. For use in association with a backplane of an item of
2 electronic equipment wherein said backplane comprises a common
3 control bus that can access a first number of device locations,
4 a method for allowing said common control bus to access more than
5 said first number of device locations, said method comprising the
6 steps of:

7 coupling a first device on a circuit board card within
8 said backplane to said common control bus;

9 coupling a complex programmable logic device on said
10 circuit board card to said common control bus and to said first
11 device;

12 receiving data in said complex programmable logic device
13 through a serial data line coupled to said common data bus; and

14 interpreting instructions in said data to allow said
15 complex programmable logic device to control data access to said
16 first device.

1 19. The method as set forth in Claim 18 further comprising
2 the steps of:

3 interpreting in said complex programmable logic device
4 a first portion of a first byte of said data to identify a card
5 address for said first device;

6 interpreting in said complex programmable logic device
7 a second portion of said first byte of said data to identify a
8 device code of said first device; and

9 interpreting in said complex programmable logic device
10 a third portion of said first byte of said data to identify an
11 instruction to read data or write data to said first device.

1 20. The method as set forth in Claim 19 wherein said first
2 device is one of: an electrically erasable programmable read only
3 memory, a card processor, a card status register, and a card
4 control register.